

Icom 7300/7610 Adjusting RF Power Digital Modes

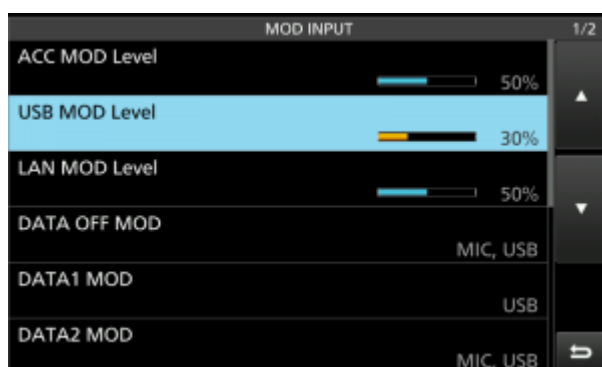
How do you adjust RF power output in digital modes like FT8 and PSK31? In the Icom manual it states, "When operating in the SSB data mode, adjust the device's output level to be within the ALC zone." So contrary to the old rule that ALC fluctuation is bad, that is not the case with these new SDR transceivers. I had been adjusting my power mostly with the PWR slider in some of the software programs I use. That is a good way and works perfectly fine, but the ALC will adjust too. Here's a way to keep a consistent ALC and maintain a clean signal. Use your own judgement as to how much ALC is sufficient.

Icom 7300/7610 Menu

Both transceivers are very similar. The first setting to look at is the USB MOD Level. Currently mine is set to 30% in the 7610. It works well with all of the software programs I use, Ham Radio Deluxe DM780, WSJT-X, WinWarbler and Fldigi.

In the 7300 it is in Menu>Set>Connectors. Look for USB MOD Level. Try around 40% in this radio.

In the Icom 7610 go one menu deeper to MOD INPUT. Try around 30%.



Icom 7300/7610 MULTI Knob

This is where the RF power is adjusted and it's the only setting needed to increase or decrease RF power output. Using this method the ALC will stay the same whether running 10 watts, 50 watts or 100 watts.

Push the MULTI knob and select RF POWER with the touch of a finger. Rotate the MULTI knob and set you RF power to the desired setting. Mine is normally around 30% and I get 30 watts output.

Windows Playback Devices Nifty Fifty

One more important setting for those using Windows machines. Set the Speaker Level in Windows to 50. This 50 works great with all the software I use for digital modes.

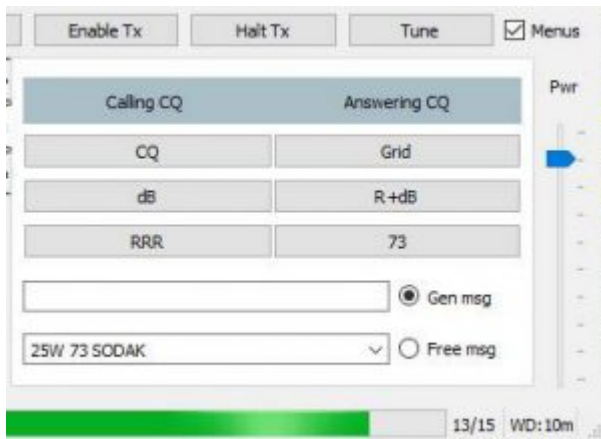
In Windows Right-click the Speaker icon in the Windows taskbar, select Playback devices, double-click the USB Audio CODEC, select the Levels tab and adjust the Speakers to 50.

All of these adjustments are in the video below.

WSJT-X Pwr Slider

We will only use the Pwr slider in WSJT-X to adjust and set the ALC.

My slider is almost to the top of the scale. This puts my ALC at approximately 1/2 scale in the ALC zone on the radio when I transmit.



Adjust yours when tuning (using the Tune button) and keep the ALC between 1/2 and 3/4 scale in the ALC zone.

We won't need to touch this again unless there's a change in the radios USB MOD Level or the Windows Speaker Level in the USB Audio CODEC.

Ham Radio Deluxe DM780 Soundcard TX Level



The slider is almost to the top of the scale. Adjust it for

1/2 to 3/4 ALC in the ALC zone while transmitting.

We won't need to touch this again.

WinWarbler

WinWarbler doesn't have a visible RF power slider like WSJT-X and DM780. It uses the Windows Speaker Levels setting in the USB Audio CODEC.

Fldigi

Like WinWarbler, Fldigi doesn't have a visible RF Power slider.

Adjusting RF Power For Digital Modes

To adjust and set the RF Power just use the MULTI knob on the Icom 7300 and Icom 7610.

It doesn't matter if you run 10 watts, 50 watts or 100 watts, the ALC will be consistent.

This is the beauty of this method and according to the manual and the Icom experts having ALC within the ALC zone is not a bad thing, but really what we should be looking for.

RF Power Video

The video below covers everything in this article and shows an example of good and bad signals using the Icom 7610 Audio Scope.

Conclusion

Your setting for the USB MOD Level may differ slightly to get the optimum ALC for each software program you use. Experiment

a little.

Many have reported the Icom 7300 and 7610 can still maintain a clean signal with the ALC at max of the ALC scale. I have chosen to stay within the ALC zone between 1/2 and 3/4 scale.

Others report 1/3 scale is best for them and they maintain a clean signal. Experiment a little.

There are different ways to adjust the RF power, but if you want to maintain a consistent ALC, try this method.

You may still prefer to use the RF power slider in the software like many Hams and there is nothing wrong with that.

Some Hams will prefer to use the software and some will like using the MULTI knob on the transceiver.

How do you adjust yours?

Thank you again for coming by and I appreciate all of the comments. If you have a question please comment below. I will do my best to answer it and your experience will undoubtedly help others as well.

Best 73!

Rich, K0PIR

Sources:

Page 36 of the Icom 7610 Advanced Manual

[Icom 7300 Screen Captures](#)

[Icom 7610 Screen Captures](#)

[Icom America IC-7300](#)

[Icom America Icom IC-7610](#)